



Federal Water Pollution Control Act enacted in 1948 is amended establishing structure for comprehensive national program to Act (SDWA) enacted to regulate public water supplies ... 1975 Auto manufacturers install first catalytic converters to meet

# CLEAN WATER

Region 7 has a rich and varied abundance of water resources. The major rivers and lakes integrate the overall character of the land, but even more evident, reflect the richness of rainfall in the east that tapers off to the west. The surface water resources consist of about 374,000 miles of rivers and streams, and about 1,145,000 acres of lakes, reservoirs and ponds. These waters are a significant component of Region 7's environmental resources. They provide water for drinking water, irrigation of croplands, and industrial processes. The rivers and lakes also provide habitat for fish and other aquatic species, recreation, barge traffic, and hydroelectric power generation.

The quality of surface water resources is judged by their capability to maintain specific uses designated in each state's water quality standards. Each water body is designated for a variety of uses, including swimming, wading, boating, public water supply, fish consumption, or maintenance of aquatic life. About 32 percent of the assessed lake areas and 51 percent of the assessed rivers and streams fail to support uses designated by each state's water quality standards. This results primarily from contamination from pesticides, plant nutrients, sediments, fecal coliform bacteria, and metals.

Monitoring data show that sedimentation was the leading cause of impairment of water quality in streams, while turbidity/suspended solids and

pesticides were the main causes in lakes. Agriculture was the primary source of these impaired uses in both streams and lakes. This comes as no surprise considering the huge acreage in the four states devoted to farming and the reduction in impacts from point sources of pollution. The reduction in point source pollution has been due to expenditures during the past 25 years of billions of dollars for wastewater treatment by both municipalities and industries.

## ***Public Water Systems***

A public water system is defined as any facility that provides water to 25 or more persons, or 15 or more service connections, at least 60 days of the year. This includes not only cities, rural water districts, and large privately-owned utilities, but also subdivisions, mobile home parks, rural schools and churches with their own source of water. There are more than 4,000 community public water systems in Region 7, serving more than 11.4 million people.

EPA has set standards for more than 80 contaminants in drinking water that may be a threat to public health. These standards require routine testing, and set maximum contaminant levels which the public water systems must not exceed. Any exceedances must be reported. In some circumstances, EPA requires that public water systems provide specific treatment levels to protect consumers against potential contamination that is difficult to detect through testing.

The Safe Drinking Water Act amendments of 1996 established a strong new emphasis on preventing drinking water contamination problems through the Drinking Water State Revolving Fund.

Region 7 states are providing more than 50 percent of their project funds for loans to small communities. These loans are used to rehabilitate or develop water sources; install or upgrade treatment facilities; install or upgrade water storage facilities such as treated water reservoirs; prevent microbiological contaminants from entering the water system; and install or replace transmission and distribution pipes to prevent contamination caused by leaks or breaks in the pipe, or to improve water pressure.

### **Groundwater Protection**

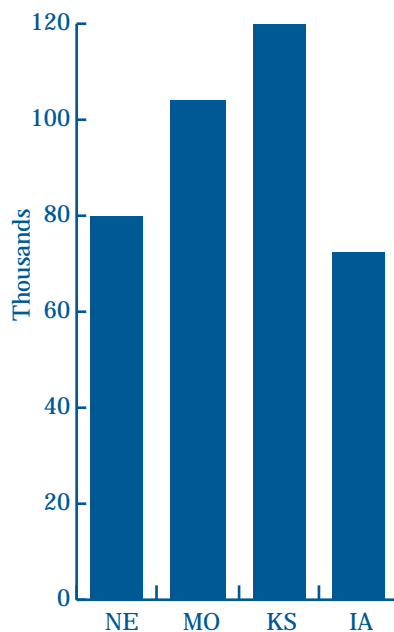
Groundwater is an important resource in Region 7 that is used extensively for domestic and agricultural purposes. More than 85 percent of public water systems in Region 7 rely on groundwater as the drinking water source. In many areas, water from underground aquifers is the only practical source of water. Groundwater has often been taken for granted as a limitless and clean resource.

Region 7 provides funding and support to states, tribes and local governments for source water, groundwater, and wellhead protection programs that emphasize preventing

contamination. Many public water systems have implemented protection programs to safeguard supplies.

All four states have established and implemented a Wellhead Protection Program. Partnering with entities such as the Rural Water Association, Groundwater Foundation, and Midwest Assistance Program provides a back-up system for educating communities. In addition, each of Region 7 states has submitted to EPA its Source Water Protection Program for review and

River Miles



approval. Each state has tailored its plan to provide the best possible protection to its public drinking water supplies.

### **Underground Injection Control Program**

The Underground Injection Control (UIC) program, as part of the Safe Drinking Water Act, is designed to prevent contamination of Underground Sources of Drinking Water (USDW) by injection wells. Basically, a USDW is an aquifer or portion of an aquifer which supplies a public water system or contains a sufficient quantity of groundwater to supply a public water system. Wells injecting into or above a USDW have a high potential for contaminating aquifers that could serve or are currently serving as drinking water sources.

Region 7 has about 13,000 shallow injection wells registered with either EPA or the states. EPA is currently developing additional regulations to provide stricter controls over this type of wells.

### **Management Plans for Pesticides**

The states in Region 7 have developed generic Pesticide Management Plans in preparation of an anticipated EPA requirement to protect groundwater from certain products. These plans are an important management tool for protecting regional water resources.

### **City of Wichita Solves River Problems**

Since November 1973, The City of Wichita, Kansas, has monitored water quality



*Safe Drinking Water Amendments, 1996, established strong new emphasis on preventing drinking water contamination through source water protection.*

downstream on the Arkansas River near Derby, Kansas. Levels of ammonia had been high, and the City's sewage treatment plant was the principal contributor. Ammonia levels were frequently as high as 8 milligrams per liter. The acceptable level for ammonia is about 1 milligram per liter.

During late 1990, the treatment plant initiated nitrification which reduces ammonia discharges. Since that time, levels have measured less than 1 milligram per liter, and fish population data suggest water quality is on the rebound.

In addition, since there is a concentration of aircraft industries in Wichita, the City wanted to reduce two identified metal wastes of concern, cadmium and lead, discharged to the City's sewage treatment plant. An effective pretreatment program from 1988 to 1996 reduced 95 percent of cadmium and 70 percent of lead. Since the City was able to produce high quality biosolids, it developed avenues for applications to croplands. Wichita now has agreements with area farmers to apply safe biosolids on approximately 20,000 acres.

### ***Largest Civil Penalty Under Clean Water Act Levied Against Koch Industries***

One of the nation's largest private oil pipeline companies, Koch Industries, Inc., Wichita, Kansas, agreed January 13, 2000, to pay a \$30 million civil penalty, improve its leak-protection program, and spend \$5 million for purchasing and restoring wetlands and other beneficial environmental projects. It was the largest civil fine ever levied under the Clean Water Act. Koch had spilled three million gallons of oil and related products from 1990 to 1997 into lakes and streams in Kansas, Missouri, and four other states.

The company will pay \$1.5 million to buy and preserve wetlands or wildlife habitat in Kansas and Oklahoma. The company will spend another \$1 million to conduct a pipeline safety study in Texas, Kansas and Oklahoma aimed at educating the oil and gas industry about oil spill prevention.

The company must also hire an independent firm to perform an annual audit for at least three years, and report on whether the company is meeting the requirements of the settlement and applicable environmental laws.